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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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MI 6108 (US)

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EXAMINER

NELSON, MICHAEL B

ART UNIT

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4145

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/557,297	Applicant(s) PERDOMI, GIANNI	
	Examiner Michael B. Nelson	Art Unit 4145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060428</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 1 and 6 are objected to because of the following informalities: improper Markush group format. According MPEP § 2171.05(h), one acceptable form of alternative expression, which is commonly referred to as a Markush group, recites members as being “selected **from the group consisting of** A, B and C.” See *Ex parte Markush*, 1925 C.D. 126 (Comm'r Pat. 1925). Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 6 recite a composition comprising 80-100% by weight of a random ethylene polymer and 5-30% by weight of a random interpolpolymer of propylene. The bounds of these weight percentages appear to be incongruous. For example, an embodiment of the invention in which the composition has 100% by weight of a random ethylene polymer could not possibly also have 5-30% by weight of a random interpolpolymer of propylene. Likewise, an embodiment of the invention in which the composition has 30% by weight of a random interpolpolymer of propylene could not possibly also have 80-100% by weight of a random ethylene polymer. Appropriate correction is required. No new matter shall be submitted.

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Also, regarding claims 1 and 6, the phrase "optionally" (part II, ii) renders the claims indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. Appropriate correction is required. No new matter shall be submitted. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaoglu et al. (US 6,492,010).

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Regarding claim 1, Karaoglu et al. discloses a stretchable wrap film having a value of MD tear resistance, a value of TD tear resistance, and a value of MD tensile strength at 30% comprising a polymer blend, the polymer blend comprising (percent by weight):

I) 50 to 90% of an ethylene polymer composition

(See C10, L15-30. Resin IT8 is an ethylene plastomer, C9 L45-57, and resin IT3 is an mLLDPE, C9 L09-25, both of which are ethylene polymers. Combined with IT11, which is also an ethylene polymer, gives a composition that is 69 wt% of the polymer blend of Layer A, which is within the claimed range)

having an ester content, comprising a recurring unit derived from an ester selected from

(1) ethylenically unsaturated organic monomer of esters of unsaturated C3-C20 monocarboxylic acids and C1 to C24 monovalent aliphatic or alicyclic alcohols,

(See C9 L57-7. Resin IT11 is an ethylene/methyl acrylate copolymer. Methyl acrylate is an ester of the type (1) above.)

and

(2) vinyl esters of saturated C2-C18 carboxylic acids,

wherein the ester content ranges from 2.5 to 8 wt % based on the total weight of the ethylene polymer composition

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(See C10, L15-30 also see C9 L57-7. IT11 has a methyl acrylate composition of 27wt % and in combination with IT8 and IT3 components makes an overall methyl acrylate composition of 7.8 wt%, which is within the claimed range);

the ethylene polymer composition having a density ranging from 0.920 to 0.94 g/mL

(See C10, L15-30. The weight averaged density of the combination of IT8 (0.873 g/ml), IT3 (0.9150 g/ml) and IT11 (0.948 g/ml) is .921g/mL, which is within the claimed range)

II) 10 to 50% of an ethylene-based polymer component having a density ranging from 0.9 to 0.930 g/mL and a melt flow rate up to 4 g/10 min

(See C10 L15-30 also see C9 L35-40. In stretch film Layer A, IT4 is present at 31wt% of Layer A, the density is 0.917 g/mL and the melt flow rate is 2.3 g/10min, all of which are within the claimed range)

the ethylene-based polymer component being selected from:

i) a linear polyethylene consisting of ethylene a first $\text{CH}_2=\text{CHR}$ a-olefin, where R is a hydrocarbon radical having 2-8 carbon atoms

(see C9 L25-40. In stretch film Layer A, IT4 is ethylene-octene-1 which is a linear polyethylene of type i).;

Karaoglu et. al is silent as to the MD tear resistance, the TD tear resistance and the MD tensile strength of the stretch wrap film. However, in light of the substantially identical polymer composition of the stretch wrap film in Karaoglu et. al with the instant stretch wrap film, it will, inherently, possess the claimed properties. See MPEP 2112.

Karaoglu et. al does not explicitly disclose the specific 0.5 to 20 mol% of alpha-olefin in the linear polyethylene (III). Since the instant specification is silent to unexpected results, the mol% of alpha-olefin in the linear polyethylene is not considered to confer patentability to the claims. As the rheological properties of the linear polyethylene are variables that can be modified, among others, by adjusting the mol% of alpha-olefin in the linear polyethylene, the mol% of alpha-olefin in the linear polyethylene would have been considered a result effective variables by one having ordinary skill in the art at the time the invention was made.

As such, without showing unexpected results, the claimed mol% of alpha-olefin in the linear polyethylene cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the mol% of alpha-olefin in the linear polyethylene to obtain the desired rheological properties (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).)

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Regarding claim 2, Karaoglu et al. discloses all the claim limitations as set forth above. Additionally the reference discloses the film of claim 1, wherein polymer composition (I) is selected from ethylene- methyl acrylate copolymer, ethylene-ethyl acrylate copolymer, ethylene-butyl acrylate copolymer and ethylene-vinyl acetate copolymer (See C9, L57-67).

Regarding claim 3, Karaoglu et. al discloses all the claim limitations as set forth above. Additionally the reference discloses the film of claim 1, wherein linear polyethylene (i), the first $\text{CH}_2=\text{CHR}$ a-olefin is selected from butene-1, hexene-1, octene-1 and 4- methyl-1 -pentene (See C9, L25).

Regarding claim 6, Karaoglu et. al discloses all the claim limitations as set forth above. Additionally the reference discloses a container packaging comprising a stretchable wrap film (See C1, L16-45)

7. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper (US 4,504,434).

Regarding claim 1, Cooper discloses a stretchable wrap film having a value of MD tear resistance, a value of TD tear resistance, and a value of MD tensile strength at 30% comprising a polymer blend, the polymer blend comprising:

I) 50-90% of an ethylene polymer composition having an ester content

(See C2 L45-60. The copolymer of ethylene and vinyl acetate is the ethylene polymer composition of I) above and is exemplified at

68wt% in example 1, which is within the claimed range (C8, L34-35)),

comprising a recurring unit derived from an ester selected from

- (1) ethylenically unsaturated organic monomer of esters of unsaturated C3-C20 monocarboxylic acids and C1 to C24 monovalent aliphatic or alicyclic alcohols, and
- (2) vinyl esters of saturated C2-C18 carboxylic acids,

(See C2 L45-60. Vinyl acetate is an ester of the type (2) above)

wherein the ester content ranges from 2.5 to 8 wt. % based on the total weight of the ethylene polymer composition;

(See C10 L5-15 example 6. "USI 289" is has a ethylene vinyl acetate copolymer with a vinyl acetate concentration of 4%, which is within the claimed range (C5, L3-35))

and

II) 10-50% of an ethylene-based polymer component having a density ranging from .9 to .930 g/mL and a melt flow rate up to 4 g/10 min.

(C8 L34-35, example 1. The linear copolymer of ethylene and a higher alkene is present at 30 wt.%, which is within the claimed range);

the ethylene-based polymer component being selected from:

- i) a linear polyethylene consisting of ethylene and a first $\text{CH}_2=\text{CHR}$ a-olefin, where R is a hydrocarbon radical having 2-8 carbon atoms

(See C2 L45-60. The linear copolymer of ethylene and a higher alkene is a linear polyethylene of type i) above.)

Cooper is silent as to density of the ethylene polymer composition having an ester content (I) ranging from 0.920 to .94 g/mL. However, in light of the substantially identical type of ester and ester composition in the ethylene polymer composition having an ester content of Cooper with the instant ethylene polymer composition having an ester content, it will, inherently, possess the claimed properties. See MPEP 2112.

Cooper is silent as to the ethylene-based polymer component (II) having a density ranging from 0.9 to 0.930 g/mL and a melt flow rate up to 4 g/10 min. However, in light of the substantially identical alpha-olefin type and composition of the ethylene-based polymer component of Cooper with the instant the ethylene-based polymer component, it will, inherently, possess the claimed properties. See MPEP 2112.

Cooper is silent as to the MD tear resistance, the TD tear resistance and the MD tensile strength of the stretch wrap film. However, in light of the substantially identical polymer composition of the stretch wrap film in Cooper with the instant stretch wrap film, it will, inherently, possess the claimed properties. See MPEP 2112.

Cooper does not explicitly disclose the specific 0.5 to 20mol% of alpha-olefin in the linear polyethylene (Iii). Since the instant specification is silent to unexpected

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results, the mol% of alpha-olefin in the linear polyethylene is not considered to confer patentability to the claims. As the rheological properties of the linear polyethylene are variables that can be modified, among others, by adjusting the mol% of alpha-olefin in the linear polyethylene, the mol% of alpha-olefin in the linear polyethylene would have been considered a result effective variables by one having ordinary skill in the art at the time the invention was made.

As such, without showing unexpected results, the claimed mol% of alpha-olefin in the linear polyethylene cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the mol% of alpha-olefin in the linear polyethylene to obtain the desired rheological properties (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).)

Regarding claim 2 Cooper discloses all the claim limitations as set forth above. Additionally the reference discloses the film of claim 1, wherein polymer composition (I) is selected from ethylene- methyl acrylate copolymer, ethylene-ethyl acrylate copolymer, ethylene-butyl acrylate copolymer and ethylene-vinyl acetate copolymer (See C2, L47-54)

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Regarding claim 3, Cooper discloses all the claim limitations as set forth above. Additionally the reference discloses the film of claim 1, wherein linear polyethylene (i), the first $\text{CH}_2=\text{CHR}$ α -olefin is selected from butene-1, hexene-1, octene-1 and 4-methyl-1-pentene (See C5, L60-65).

Regarding claim 6, Cooper discloses all the claim limitations as set forth above. Additionally the reference discloses a container packaging comprising a stretchable wrap film (See C1, L7-12)

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karaoglu et. al (US 6,492,010) as applied to claims 1-3 and 6 above, and in view of Cometto et. al (WO 9520009 A1).

Regarding claims 4 and 5, Karaoglu et. al discloses the claim limitation as set forth above.

Karaoglu et. al does not disclose a polymer blend comprising a random polymer of ethylene blended with a random interpolymers with propylene wherein the random polymer of ethylene is an ethylene-butene-1 copolymer and wherein the random polymer of propylene is a propylene-ethylene-butene-1 terpolymer.

Cometto et. al does disclose a polymer blend comprising a random polymer of ethylene blended with a random interpolymers of propylene

(See page 4, the described polymeric compositions is the polymer blend) wherein the random polymer of ethylene is an ethylene-butene-1 copolymer (claim 4)

(See page 7, component (a) corresponds to the random polymer of ethylene and a copolymer of ethylene and butene-1 is equivalent to an ethylene-butene-1 copolymer)

and wherein the random polymer of propylene is a propylene-ethylene-butene-1 terpolymer. (claim 5)

(See page 7, component (b) corresponds to the random polymer of propylene and a copolymer of propylene with ethylene and butene-1 is equivalent to an propylene-ethylene-butene-1 terpolymer)

Cometto et. al further discloses that the polymer blend with the particular random polymers of ethylene and propylene has advantages of improved processing characteristics and mechanical properties, including, among others, impact resistance and tear resistance. These properties are improved over the alternative linear low density polyethylene (LLDPE), which was disclosed above in Karaoglu et. al as a component of the stretch wrap film (See Page 3).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the stretch wrap film as taught by Karaoglu et. al, by substituting the linear polyethylene with the polymer blend comprising a random polymer of ethylene blended with a random interpolymers of propylene wherein the random polymer of ethylene is a ethylene-butene-1 copolymer and wherein the random polymer of propylene is a propylene-ethylene-butene-1 terpolymer as taught by Cometto et. al for the purpose of improving the processing characteristics and the mechanical properties of the stretch wrap film.

9. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper (US 4,504,434) as applied to claims 1-3 and 6 above, and in view of Cometto et. al (WO 9520009 A1).

Regarding claims 4 and 5, Cooper discloses the claim limitation as set forth above.

Cooper does not disclose a polymer blend comprising a random polymer of ethylene blended with a random interpolmer with propylene wherein the random polymer of ethylene is a ethylene-butene-1 copolymer and wherein the random polymer of propylene is a propylene-ethylene-butene-1 terpolymer.

Cometto et. al does disclose a polymer blend comprising a random polymer of ethylene blended with a random interpolmer of propylene

(See page 4, the described polymeric compositions is the polymer blend)
wherein the random polymer of ethylene is an ethylene-butene-1 copolymer

(See page 7, component (a) corresponds to the random polymer of ethylene and a copolymer of ethylene and butene-1 is equivalent to an ethylene-butene-1 copolymer)

and wherein the random polymer of propylene is a propylene-ethylene-butene-1 terpolymer.

(See page 7, component (b) corresponds to the random polymer of propylene and a copolymer of propylene with ethylene and butene-1 is equivalent to an propylene-ethylene-butene-1 terpolymer)

Cometto et. al further discloses that the polymer blend with the particular random polymers of ethylene and propylene has advantages of improved processing characteristics and mechanical properties, including among others impact resistance and tear resistance (see Cometto et. al page 3). These properties are improved over the alternative linear polyethylene, which was disclosed above in Cooper as a component of the stretch wrap film (See paragraph 7 of the current office action, regarding claim 1).

It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the stretch wrap film as taught by Cooper, by substituting the linear polyethylene with the polymer blend comprising a random polymer of ethylene blended with a random interpolymers of propylene wherein the random polymer of ethylene is a ethylene-butene-1 copolymer and wherein the random polymer of propylene is a propylene-ethylene-butene-1 terpolymer as taught by Cometto et. al for the purpose of improving the processing characteristics and the mechanical properties of the stretch wrap film.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The reference Schoenberg (US 4,551,380) discloses a polymer composition of LLDPE and EVA

The reference Newsome et. al (EP 0346944) discloses a polymer blend of LLDPE and EVA

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Nelson whose telephone number is (571) 270-3877. The examiner can normally be reached on Mon-Thur 730AM-5PM, Fri 730AM-4PM Alternate Fri Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on (571) 272-1453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MN
12/04/07

/Basia Ridley/
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